



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, TN 38133

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November 3, 2016

Mike Simpson
C.O.O.
Collierville Schools District
146 College Street
Collierville, TN 38017

CERTIFIED MAIL 91 7108 2133 3932 2020 7575
RETURN RECEIPT REQUESTED

Re: Notice of Violation
Collierville High School
TN Individual Construction Permit Tracking Number: TN0081787
Collierville, Tennessee

Dear Mr. Simpson:

On October 10, 2016, and October 14, 2016, personnel from the Tennessee Department of Environment and Conversation, Division of Water Resources conducted inspections of the Collierville High School construction site. The purpose of the inspections was to determine compliance with the Tennessee Construction Individual Permit TN0081787 and the *Tennessee Water Quality Control Act*. A copy of the photo document and the Compliance Inspection Report are enclosed for your reference. Please refer to them for specific information regarding observations related to the above referenced permit and the *Tennessee Water Quality Control Act*. The following observations were made while on-site:

- Erosion prevention and sediment control (EPSC) measures had not been installed or maintained in accordance with the submitted Storm Water Pollution Prevention Plan (SWPPP) or the *Tennessee Erosion Prevention and Sediment Control Handbook*. The SE sediment basin and associated temporary diversion ditch had not been installed though the entire drainage basin had been disturbed. The silt fence that is installed parallel to the permanent grass lined diversion ditch located on the south side of the construction site had several sections that were failing and allowing sediment and sediment laden stormwater to enter the permanent grass lined diversion ditch. As a result, sediment laden stormwater in the permanent grass lined diversion ditch was discharging into the unnamed tributary of Nonconnah Creek at Outfall SW6. Please be aware that subsection IV.E.3.a (pg. 38) of the TN Individual Construction Permit TN0081787 states in part:

The design, inspection and maintenance of Best Management Practices (BMPs) described in SWPPP must be prepared in accordance with good engineering practices and at a minimum shall be consistent with the requirements and recommendations contained in the current edition of the Tennessee Erosion and Sediment Control Handbook. In addition, all control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications (where applicable) and good engineering practices.

- Sediment laden stormwater and hydroseed from the construction site had discharged into the unnamed tributary of Nonconnah Creek (i.e., waters of the state). *Tennessee Code Annotated* 69-3-114(a) states in part:

It is unlawful for any person to discharge any substance into the waters of the state or to place or cause any substance to be placed in any location where such substances... cause any of the damages as defined in § 69-3-103... Any such action is declared to be a public nuisance.

Furthermore, *Tennessee Code Annotated* 69-3-103 states in part:

“Pollution” means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of the waters of this state, including, but not limited to, changes in temperature, taste, color, turbidity, or odor of the waters that will:

Result or will likely result in harm, potential harm or detriment to the health of animals, birds, fish, or aquatic life;

- From the maturity of the sparse vegetation at several locations including, but not limited to the drainage channel south of the NW sediment basin and the banks of the NE and NW sediment basins, it appeared that activity in these areas had ceased for over 14 days and the areas had not been sufficiently stabilized. As discussed during the pre-construction meeting held May 2, 2016, and mentioned in the pre-construction meeting summary letter dated May 5, 2016, temporary or permanent soil stabilization at the construction site must be completed no later than 14 days after the construction activity at that portion of the site has temporarily or permanently ceased. Subsection IV.E.3.b (pg. 40) of the TN Individual Construction Permit TN0081787 states in part:

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. Temporary or permanent soil stabilization at the construction site (or a phase of the project) must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

Steep slopes shall be stabilized not later than 7 days after construction activity on the slope has temporarily or permanently ceased.

- Rills and gullies were observed on the banks of both sediment basins and around the NW sediment basin discharge pipe. Vertical tracking by a bulldozer was observed on the banks of the NE sediment basin. Roughening a sloping bare soil surface with horizontal depressions helps control erosion by aiding the establishment of vegetative cover with seed, reducing runoff velocity and increasing infiltration. The horizontal depressions also trap sediment on the face of the slope. Vertical tracking on bare soil slopes will promote rill and gully formation. Subsection IV.E.3.a (pg. 38-39) of the TN Individual Construction Permit TN0081787 states in part:

All control measures selected must be able to slow runoff so that rill and gully formation is prevented.

- A summary of the required twice-weekly inspections have not been included with the submitted monthly quality assurance site assessment reports. Please note that, in referring to the quality assurance site assessments, subpart IV.C (pg. 35) and subsection IV.E.8.a (pg. 45) of the TN Individual Construction Permit TN0081787 states in part:

The monthly report shall include a summary of all required inspections and quality assurance site assessments from the previous month.

- A review of the required twice-weekly inspections indicate that identified maintenance needs have not been accomplished in a timely manner. Please note that, section IV.E.7 (pg. 44) of the TN Individual Construction Permit TN0081787 states in part:

Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event, but in no case more than seven days after the need is identified.

Additionally, subsection IV.E.8.a (pg. 46) of the TN Individual Construction Permit TN0081787 states in part:

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than seven days after the need is identified.

- The required water depth gauge within the basin that was discussed during the pre-construction meeting held May 2, 2016, and mentioned in the pre-construction meeting summary letter dated May 5, 2016, had not been installed in the NE or NW sediment basins. The purpose of the water depth gauge is to determine the volume of water in the sediment basins prior to chemical treatment. By utilizing the depth gauge, your contractor (i.e., Reel Neet Erosion Control) will be able to calculate the proper amount of chemical necessary to treat the sediment basins. Please note that subpart I.A (pg. 4) of the of the TN Individual Construction Permit TN0081787 states in part that the minimum documentation for the sediment basins shall include:

3. Water depth in the sediment basin (read from a gauge within the basin).

- The required notice was not posted on-site. Section IV.B.3 (pg. 34) of the TN Individual Construction Permit TN0081787 states in part:

The permittee shall post a notice near the main entrance of the construction site accessible to the public with the following information:

- a. a copy of the cover page from this individual NPDES permit;
- b. name, company name, E-mail address (if available), telephone number and address of the project site owner or a local contact person;
- c. a brief description of the project; and
- d. the location of the SWPPP if the site is inactive or does not have an on-site location to store the plan.

The notice must be maintained in a legible condition. If posting this information near a main entrance is infeasible due to safety concerns, or not accessible to the public, the notice shall be posted in a local public building.

- As of October 14, 2016, the SE sediment basin had not been installed as indicated in the submitted SWPPP, even though the entire drainage basin had been disturbed. As indicated in the submitted SWPPP and discussed during the pre-construction meeting held May 2, 2016, and mentioned in the agenda attached to the pre-construction meeting summary letter dated May 5, 2016, the sediment basins should be constructed and fully operational before any other earthwork operations up-gradient of the basin begin. Please be aware that subsection IV.E.3.a (pg. 40) of the TN Individual Construction Permit TN0081787 states in part:

Erosion prevention and sediment control measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period.

- As of October 14, 2016, no sign identifying Outfall SW4 was observed. Please be aware that subpart III.D (pg. 29) of the TN Individual Construction Permit TN0081787 states in part:

The permittee shall place an outfall sign at an outfall seven days prior to the commencement of any construction activity in the outfall's drainage area. Outfall signs shall be clearly visible to on-site personnel and must clearly list the Outfall number. Outfall signs must be maintained and relocated as needed to mark the correct location of the outfall. An outfall sign may be removed from temporary outfalls once the outfall has been eliminated.

- The required signage identifying the primary permittee, phone number, NPDES permit tracking number and permitting authority information was observed on Shelby Drive. However, Shelby Drive has been closed for widening and is no longer accessible to the public. Since the permit requires a sign be placed at each public right-of-way an additional sign should be placed near the main entrance located on Sycamore Road in a location that is viewable from the public right-of-way. Please be aware that subpart III.D (pg. 29) of the TN Individual Construction Permit TN0081787 states in part:

Within sixty days of the effective date of this permit a sign shall be placed at each public right-of-way and at locations where receiving streams leave the permittee's property. These sign(s) should be clearly visible to the public from the bank and the receiving stream or from the nearest public property/right-of-way, if applicable.

- According to the submitted DMRs, IMP1 and IMP2 have not been sampled at the required frequency as described in the permit. As discussed during the reporting requirements meeting held at the Renaissance Group on July 29, 2016, and mentioned in the follow-up email dated August 5, 2016, please be aware that table in subpart I.A (pg. 4) of the TN Individual Construction Permit TN0081787 shows the required sampling frequency for IMP1 and IMP2 to be 1/week.

The monthly water sample results should be reviewed routinely and may be considered an indicator of BMP effectiveness. Elevated turbidity and total suspended solids above the background concentrations at instream monitoring point IMP1 may indicate that site BMPs are not effective at preventing pollution from entering the unnamed tributary of Nonconnah Creek (i.e., waters of the state). For example, the sampling results for September 27, 2016, indicated the mean turbidity at IMP1 was 14.6 NTU. While the mean turbidity at IMP2 was 2,850 NTU; 195 times higher than background concentrations at IMP1.

Compliance with the TN Individual Construction Permit TN0081787 is required until division has received a termination request from the permittee with the certification required under II.A.9.d (pg. 21) and the division has issued a letter acknowledging the termination request has been received and accepted. The submitted letter shall meet the signature requirements in subsection II.A.9.b (pg. 20).

To bring this site into compliance, these violations are to be corrected within seven (7) days of receiving this letter. Violations of the *Tennessee Water Quality Control Act* or failure to correct the noted violations can result in enforcement action and subject you to civil penalties.

Sedimentation of surface water degrades water quality by adversely altering the biological, physical and chemical properties of the waterway. For example, soil particles can increase water temperature, reduce plant growth, lower dissolved oxygen and cover spawning areas, aquatic insects and oxygen producing plants. Therefore, it's imperative that construction related activities install and maintain Best Management Practices to eliminate sediment discharges into receiving streams.

Required Actions:

- Eliminate the discharge of sediment and sediment-laden stormwater off-site and to the unnamed tributary of Nonconnah Creek (i.e., waters of the state) by installing and maintaining all appropriate erosion prevention and sediment control measures in accordance with the best management practices described the *Tennessee Erosion and Sediment Control Handbook* and submitted SWPPP, note additional best management practices not mentioned in the SWPPP may be necessary;
- Immediately install the SE sediment basin and temporary diversion ditch in accordance with the submitted SWPPP;
- Immediately install the required water depth gauge in the NE and NW sediment basins and in the SE sediment basin once it is installed;
- Post the required notice with all appropriate information as described on page 34 of the permit;
- Take appropriate measures to ensure that hydroseed does not enter the unnamed tributary of Nonconnah Creek (i.e., waters of the state);
- Address issues that are identified during the twice-weekly inspection or by other means within 7 days of identification;
- Stabilize all areas that are inactive including, but not limited to the banks of the sediment basins, areas around outlet pipes, all slopes where rills have formed and drainage/diversion channels with temporary or permanent stabilization practices. Please note that applying grass seed on these areas does not constitute the areas to be stabilized;
- Install the appropriate signage as required by the permit at all permitted outfalls.
- Install the appropriate signage as required by the permit at each public right-of-way.
- Beginning in the October 2016 reporting period, please including a summary of the months twice-weekly inspections with the monthly quality assurance site assessment report. Note this report will be submitted in November 2016. It may also be beneficial if the sampling results are incorporated in the report along with any actions that took place as a result of their analysis.
- Ensure all twice-weekly inspection reports are signed by the primary permittee or their duly authorized representative.
- Immediately begin sampling IMP1 and IMP2 at the required frequency as described in the permit.
- Review sampling results routinely and investigate the cause of elevated turbidity and/or total suspended solids above the background concentrations at instream monitoring point IMP1.
- By November 30, 2016, submit copies of all twice-weekly inspection reports conducted September through November 2016 for the Collierville High School construction project.
- By November 30, 2016, submit a detailed written response and photo record to this office describing corrective actions taken and measures implemented to prevent the recurrence of these violations. Please include in the response why the SE sediment basin and associated temporary diversion ditch had not been installed though the entire drainage basin had been disturbed. Also, please explain why the required water depth gauges have not been installed in the NE and NW sediment basins.

We appreciate your prompt attention and cooperation. If there are factors regarding this matter that need further discussion, please contact Steve Owens at (901) 371-3029 or Steve.R.Owens@tn.gov.

Sincerely,



Joellyn Brazile, CPESC
Environmental Program Manager
Division of Water Resources
Memphis Environmental Field Office

Enclosures: Inspection Report, ICIS NPDES Facilities Inspection Report and Photo Document

cc: TDEC/DWR/MEFO - File

ec: Collierville MS4

Thomas Dougherty; Collierville Schools, TDougherty@colliervilleschools.org

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Will Ward; TDEC-Division of Water Resources, Will.Ward@tn.gov

**Compliance Inspection Report for Individual NPDES Permit for Stormwater Discharges
from Construction Activities at the Collierville High School Construction Site
TN Individual Construction Permit Tracking Number: TN0081787**

Site/Project Name: Collierville High School			NPDES Tracking Number:	TN0081787
			Date Coverage was Issued:	April 30, 2016
Street Address or Location: South of Shelby Drive, East of Sycamore Road			Start date:	May 2016
			Estimated end date:	May 2018
Site Description: Collierville High School			Latitude (dd.dddd):	35.0171
			Longitude (-dd.dddd):	-89.6753
County(ies): Shelby	EFO: Memphis	MS4 Jurisdiction: Collierville	Acres Disturbed:	98.0
			Total Acres:	158.4
Name of Permittee (Developer/Operator): Collierville Schools District				
Name of Official Contact: Mike Simpson		Email: msimpson@colliervilleschools.org		Contact Phone: 901-861-7000
Address: 146 College Street		City: Collierville		State: TN Zip: 38017

General Comments:

On October 10, 2016, Mr. Steve Owens and Mr. Don Rautine with the Tennessee Department of Environment and Conversation, Division of Water Resources, conducted an inspection of the Collierville High School construction site. Upon arriving at the construction site Division staff spoke with Mr. Sam Ginn, Flintco site representative. During the site visit it was observed that nearly the entire permitted area (98 acres) had been cleared and graded. It appeared that the majority of the on-site drainage was being directed to the NE and NW sediment basins. The permanent diversion ditch that redirects off-site drainage to Outfall SW 6 had been completed and had been sodded. The temporary diversion ditch that runs parallel to the permanent diversion ditch had not been installed. Additionally, the SE sediment basin that receives stormwater from the temporary diversion ditch had not been installed though the entire drainage basin had been disturbed.

The required signage identifying the approximate location of outfalls SW5 and SW6 was observed (Photo 1). The banks of the unnamed tributary of Nonconnah Creek had been stabilized with rip-rap and had been sprayed with hydroseed (Photo 2). The bank stabilization work is authorized under the Aquatic Resources Alteration Permit NRS1605.039. Hydroseed was also observed on the rip-rap. The water in this portion of the unnamed tributary of Nonconnah Creek appeared clear and had very little flow. Hydroseed was also observed covering the channel's substrate (Photo 3); please ensure that future applications of hydroseed do not enter the unnamed tributary of Nonconnah Creek (i.e., waters of the state). No discharge from Outfalls SW5 and SW6 were observed during the inspection.

Outfall SW7 that was depicted in the individual construction permit modification application and SWPPP modification received August 4, 2016, had been installed. It should be noted that a modified TN Individual Construction Permit had not been issued as of the date of this inspection. Sod and rip-rap had been utilized to stabilize the discharge channel draining to Outfall SW7 and hydroseed had been applied to the surrounding area (Photo 4). Hydroseed was also observed on the rip-rap placed on the both banks of the unnamed tributary of Nonconnah Creek near SW7 (Photos 5 and 6). It also appeared that some hydroseed had entered the stream and settled on a portion of the substrate (Photo 7). The water in this portion of the unnamed tributary of Nonconnah Creek appeared fairly clear and had very little flow. No discharge from Outfall SW7 was observed during the inspection.

The existing farm pond was being dewatered via a pump into the stormdrain system that discharges into the NE sediment basin (Photos 8 and 9). The NE sediment basin, which discharges to SW4, appeared to have been completed and was holding turbid water (Photo 10). The required water depth gauge within the basin that was discussed during the pre-construction meeting held May 2, 2016, had not been installed. From the maturity of the sparse vegetation on the banks of the NE sediment basin (Photo 11), it appeared that activity in this area had

ceased for over 14 days and the area had not been sufficiently stabilized. The SWPPP indicates that inactive areas will be stabilized within 14 days after construction activity at that portion of the site has temporarily or permanently ceased. Measures to stabilize the site should be initiated as soon as possible. As required by the TN Individual Construction Permit TN0081787 and discussed during the pre-construction meeting held May 2, 2016, temporary or permanent soil stabilization at the construction site must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Stabilization of steep slopes should be completed within 7 days.

Vertical tracking was observed on the unstable banks of the NE sediment basin (Photo 12). Vertical tracking on bare soil slopes will increase stormwater runoff velocity and promote rill and gully formation. Tracking should always leave horizontal tracks, as opposed to vertical tracks. Roughening a sloping bare soil surface with horizontal depressions helps control erosion by aiding the establishment of vegetative cover with seed, reducing runoff velocity and increasing infiltration. The horizontal depressions also trap sediment on the face of the slope. The presence of a rill on the unstable south bank of the NE sediment basin (Photo 13) indicates that runoff velocities have not been sufficiently slowed.

The outlet pipe serving the NE sediment basin that discharges to Outfall SW4 had been installed, but the surrounding slope had not been stabilized (Photo 14). Sediment was observed inside the outlet discharge pipe serving the NE sediment basin (Photo 15). The August 2016 Discharge Monitoring Report (DMR) indicated that a discharge from the NE sediment basin had occurred on August 3, 2016. The submitted DMR also indicated that the sediment basin discharge was sampled and a duplicate sample was also taken in accordance with the TN Individual Construction Permit TN0081787. The results showed the sampled turbidity was 4.7 NTU and 4.6 NTU and the Total Suspended Solids were 14 mg/L for the initial and duplicate samples. The September 2016 DMR indicated that no discharge occurred from the NE sediment basin and only 0.64 in. of rain was measured at the construction site during September.

It appeared that the rip-rap outlet protection placed downgradient of the outlet pipe had been covered with sediment discharged from the sediment basin (Photo 16). The distribution of the rip-rap outlet protection within the discharge flow path appeared to be sparse. Outlet protection reduces water velocity, dissipates energy and prevents scour at the outlet of the discharge pipe. Outlet protection should be placed at discharge locations and along the length of any outfall channel to provide a non-erosive velocity flow from the discharge pipe to the receiving stream.

The water in the unnamed tributary of Nonconnah Creek downgradient of the NE sediment basin outlet pipe near Outfall SW4 appeared to have very little flow (Photo 17). No sign identifying Outfall SW4 was observed.

The required signage identifying the approximate location of instream monitoring point IMP2 near the Shelby Drive bridge was observed (Photo 18). The water in the unnamed tributary of Nonconnah Creek at IMP2 appeared slightly turbid and had very little flow when observed from the Shelby Drive bridge (Photo 19).

The required signage identifying the primary permittee, phone number, NPDES permit tracking number and permitting authority information was observed on Shelby Drive (Photo 20). However, Shelby Drive has been closed for widening and is no longer accessible to the public. Since the permit requires a sign be placed at each public right-of-way and at locations where receiving streams leave the permittee's property, an additional sign should be placed near the main entrance located on Sycamore Road in a location that is viewable from the public right-of-way.

The required signage identifying the approximate location of Outfall SW3 was observed (Photo 21). The area east and west of Outfall SW3 had been cleared (Photos 22 and 23). According to the permit this area should be stabilized within 14 days of construction activity temporarily or permanently ceasing. The period of time that this area has been inactive was unknown at the time of the inspection.

The required signage identifying the approximate location of Outfall SW2 was observed (Photo 24). The area east and west and the drainage channel discharging into Outfall SW2 had been cleared. According to the permit this area should be stabilized within 14 days of construction activity temporarily or permanently ceasing. The period of time that this area has been inactive was unknown at the time of the inspection.

Dried sediment was observed on top of the stormdrain inlet located near the partly sodded drainage channel (Photo 25) that discharges into the NW sediment basin. This indicates that sediment laden stormwater had pooled over the stormdrain inlet at some point. Sediment accumulation was observed on the outlet structure (Photo 26) that discharges stormwater that enters the stormdrain inlet shown in Photo 25. Sediment accumulation and a high water mark stain were also observed inside this outlet pipe (Photo 27). This indicates that sediment has entered the stormdrain system and discharged at this location. This outlet structure discharges to a partly sodded channel that drains to the NW sediment basin.

The drainage channel south of the NW sediment basin was unstable and numerous rills had formed on its slope (Photo 28). From the maturity of the sparse vegetation within and on the banks of the drainage channel, it appeared that activity in this area had ceased for over 14 days and the area had not been sufficiently stabilized. EPSC measures have not slowed runoff so that rill and gully formation is prevented as required by the TN Individual Construction Permit TN0081787.

The NW sediment basin that discharges to Outfall SW1 appeared to have been completed and was holding water (Photo 29). The required water depth gauge within the basin that was discussed during the pre-construction meeting held May 2, 2016, had not been installed. From the maturity of the sparse vegetation on the banks of the NW sediment basin (Photo 30), it appeared that activity in this area had ceased for over 14 days and the area had not been sufficiently stabilized. Rills were observed on the unstable banks of NW sediment basin (Photo 30). EPSC measures have not slowed runoff so that rill and gully formation is prevented as required by the TN Individual Construction Permit TN0081787. The SWPPP indicates that inactive areas will be stabilized within 14 days after construction activity at that portion of the site has temporarily or permanently ceased. Measures to stabilize the site should be initiated as soon as possible. As required by the TN Individual Construction Permit TN0081787 and discussed during the pre-construction meeting held May 2, 2016, temporary or permanent soil stabilization at the construction site must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Stabilization of steep slopes should be completed within 7 days.

A puddle of turbid water was observed downgradient of the discharge outlet serving the NW sediment basin (Photo 31). The discharge channel had steep slopes and was not stable and no outlet protection was observed downgradient of the discharge outlet. From the maturity of the sparse vegetation on the steep slopes downgradient of the discharge outlet, it appeared that activity in this area had ceased for over 7 days and the area had not been sufficiently stabilized. As required by the TN Individual Construction Permit TN0081787 and discussed during the pre-construction meeting held May 2, 2016, temporary or permanent soil stabilization at the construction site must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Stabilization of steep slopes should be completed within 7 days. Erosion was also observed around the discharge outlet (Photos 31 and 32). EPSC measures have not slowed runoff so that rill and gully formation is prevented as required by the TN Individual Construction Permit TN0081787.

Silt fence had been installed across the direct flow path of the discharge channel between the NW sediment basin outlet structure and Outfall SW1 (Photo 33). Please note that according to the *Tennessee Erosion Prevention and Sediment Control Handbook*, silt fence should not be placed in the areas of concentrated flow.

The required signage identifying the approximate location of Outfall SW1 was observed (Photo 34). The drainage channel leading to Outfall SW1 was unstable and had steep banks. No discharge from Outfall SW1 was observed

during the inspection. Slightly turbid water was observed downgradient of Outfall SW1 on the north side of Shelby Drive (Photo 35). Sediment accumulation was observed inside the drainage pipe that runs under Shelby Drive, which Outfall SW1 discharges through (Photo 36).

On October 14, 2016, Mr. Steve Owens and Mr. Alex Ward with the Tennessee Department of Environment and Conversation, Division of Water Resources, conducted a follow-up inspection of the Collierville High School construction site during a rain event. According to rain gauges located near the construction site, approximately 1 in. of rain had fallen beginning around 6:30 a.m. through the time of the inspection ended around 12:00 p.m. Upon arriving at the construction site Division staff spoke with Mr. Sam Ginn, Flintco site representative.

The silt fence that is installed parallel to the permanent grass lined diversion ditch located on the south side of the construction site had several sections that were failing and allowing sediment and sediment laden stormwater to enter the permanent grass lined diversion ditch (Photos 37, 38 and 39). The water in the permanent grass lined diversion ditch up-gradient of the failing silt fence appeared to be clear. As a result, sediment laden stormwater in the permanent grass lined diversion ditch was discharging into the unnamed tributary of Nonconnah Creek (Photos 40, 41 and 42) at Outfall SW6. An objectionable color contrast was created by the sediment laden discharge from the construction site into the unnamed tributary of Nonconnah Creek. The instream water velocity up-gradient of Outfall SW6 appeared to be slower than the water velocity down gradient of the discharge point. This is represented by the observed sediment plumes moving upstream from the discharge point, indicating the instream flow at that location was not fast enough to flush the sediment plumes downstream. It appeared that runoff from the construction site had contributed to the increased flow within the stream at the observed outfalls associated with the unnamed tributary of Nonconnah Creek. The purpose of the permanent grass lined diversion ditch is to divert offsite stormwater around the construction site.

No discharge was observed at Outfall SW7; however, the water in the stream at this location was very turbid- (Photo 43). Outfall SW7 is located downstream of Outfall SW6.

In addition to receiving stormwater runoff from the occurring rain event, the existing farm pond was dewatered into the stormdrain system that discharges into the NE sediment basin (Photos 8 and 9). As a result, the water level in the NE sediment basin was much deeper (Photo 44) than during the October 10, 2016, inspection (Photo 10). There was no discharge observed from the NE sediment basin at SW4, but it appeared that the water elevation in the unnamed tributary of Nonconnah Creek was high enough to backflow into the discharge channel that serves the NE sediment basin (Photo 45). The required water depth gauge within the basin that was discussed during the pre-construction meeting held May 2, 2016, had not been installed. Several rills had formed on the banks of the NE sediment basin since the October 10, 2016, inspection (Photos 46, 47 and 48). EPSC measures have not slowed runoff so that rill and gully formation is prevented as required by the permit.

Sediment laden stormwater was observed flowing into the stormdrain system through a stormdrain inlet located near the partly sodded drainage channel that discharges into the NW sediment basin (Photo 49). This is the same stormdrain inlet that is shown in Photo 25. Stormwater that enters the stormdrain system through this inlet is discharged into the partly sodded channel through an outlet structure that is surrounded by eroding soil (Photo 50 and 51). Once discharged into the partly sodded channel, the sediment laden stormwater flowed through a check dam and into a culvert under an entrance road located north of the main construction entrance (Photo 52). The area around the culvert inlet had not been stabilized and rills and gullies had started to form around the inlet (Photo 53). EPSC measures have not slowed runoff so that rill and gully formation is prevented as required by the

TN Individual Construction Permit TN0081787. The outlet side of the culvert discharges into an unstable and eroding drainage channel (Photo 54) that discharges into the NW sediment basin. EPSC measures have not slowed runoff so that rill and gully formation is prevented as required by the TN Individual Construction Permit TN0081787.

Additionally, stormwater entering the construction site on the north side of the entrance road located north of the main construction entrance was creating a rill and transporting sediment laden stormwater to the unstable channel (Photos 55 and 56) that drains into the NW sediment basin. At the time of the inspection it appeared that the NW sediment basin had a sufficient volume to contain the rain event (Photo 57). The required water depth gauge within the basin that was discussed during the pre-construction meeting held May 2, 2016, had not been installed.

The required notice was not observed near the main construction entrance as required by the TN Individual Construction Permit TN0081787 (pg. 34). The notice should be posted near the main entrance of the construction site that is accessible to the public.

Monthly Reports/Documentation:

Paper copies of the May 2016 – July 2016 DMRs, precipitation logs and sediment basin documentation have been received. The August 2016 and September 2016 DMRs, precipitation logs and sediment basin documentation have been successfully submitted and received electronically via NetDMR. All quarterly substrate characterization and monthly inspection/quality assurance site assessment reports have been received.

Please note that subpart IV.C (pg. 35) and subsection IV.E.8.a (pg. 44 - 45) of the TN Individual Construction Permit TN0081787 states the quality assurance site assessments should be conducted twice a month and the monthly quality assurance site assessment report shall include a summary of all required inspections and quality assurance site assessments from the previous month. This includes a summary of the required twice-weekly inspections. A summary of the required twice-weekly inspections has not been included in the monthly quality assurance site assessment reports.

Sediment laden stormwater from the construction site was observed discharging from Outfall SW5 into the unnamed Tributary of Nonconnah Creek during the October 14, 2016, inspection. Please note that the TN Individual Construction Permit TN0081787 stipulates that Outfalls SW1, SW4 and SW5 are to be sampled once per week. A sample should be collected once per week whenever discharges from these outfalls occur.

The monthly water sample results should be reviewed routinely and may be considered an indicator of BMP effectiveness. Elevated turbidity and total suspended solids above the background concentrations at instream monitoring point IMP1 may indicate that site BMPs are not effective at preventing pollution from entering the unnamed tributary of Nonconnah Creek (i.e., waters of the state). As shown in the table below, there have been several months where the sampled discharge from the construction site showed elevated values of turbidity and total suspended solids when compared to background concentrations at instream monitoring point IMP1.

For example, the sampling results for September 27, 2016, indicated the mean turbidity at IMP1 was 14.6 NTU. While the mean turbidity at IMP2 was 2,850 NTU; 195 times higher than background concentrations at IMP1.

		Turbidity (NTU)		Total Suspended Solids (mg/L)	
Reporting Period	Sampling Point	Monthly Average	Daily Max	Monthly Average	Daily Max
May 2016	IMP1	32.5	33	21	23
	IMP2	24	24	21.5	23
	SW1	No Discharge	No Discharge	No Discharge	No Discharge
	SW2	No Discharge	No Discharge	No Discharge	No Discharge
	SW3	No Discharge	No Discharge	No Discharge	No Discharge
	SW4	No Discharge	No Discharge	No Discharge	No Discharge
	SW5	No Discharge	No Discharge	No Discharge	No Discharge
	SW6	No Discharge	No Discharge	No Discharge	No Discharge
	SW7	No Discharge	No Discharge	No Discharge	No Discharge
June 2016	IMP1	94	96	55	58
	IMP2	56	56	35.5	38
	SW1	No Discharge	No Discharge	No Discharge	No Discharge
	SW2	3,900	3,900	4,270	4,270
	SW3	No Discharge	No Discharge	No Discharge	No Discharge
	SW4	No Discharge	No Discharge	No Discharge	No Discharge
	SW5	No Discharge	No Discharge	No Discharge	No Discharge
	SW6	No Discharge	No Discharge	No Discharge	No Discharge
	SW7	No Discharge	No Discharge	No Discharge	No Discharge
July 2016	IMP1	46.6*	70	15	20
	IMP2	52.3	70	10.3	13
	SW1	No Discharge	No Discharge	No Discharge	No Discharge
	SW2	5,400	5,600	1,490	1,530
	SW3	No Discharge	No Discharge	No Discharge	No Discharge
	SW4	No Discharge	No Discharge	No Discharge	No Discharge
	SW5	No Discharge	No Discharge	No Discharge	No Discharge
	SW6	No Discharge	No Discharge	No Discharge	No Discharge
	SW7	No Discharge	No Discharge	No Discharge	No Discharge
August 2016	IMP1	12	13	7.5	13
	IMP2	29.5	30	7.5	11
	SW1	170,000	170,000	845	965
	SW2	No Discharge	No Discharge	No Discharge	No Discharge
	SW3	No Discharge	No Discharge	No Discharge	No Discharge
	SW4	4.65	4.7	14	14
	SW5	No Discharge	No Discharge	No Discharge	No Discharge
	SW6	No Discharge	No Discharge	No Discharge	No Discharge
	SW7	No Discharge	No Discharge	No Discharge	No Discharge
September 2016	IMP1	7.875	20	56.5	147
	IMP2	1,550	2,900	104.75	113
	SW1	No Discharge	No Discharge	No Discharge	No Discharge
	SW2	No Discharge	No Discharge	No Discharge	No Discharge
	SW3	No Discharge	No Discharge	No Discharge	No Discharge
	SW4	No Discharge	No Discharge	No Discharge	No Discharge
	SW5	No Discharge	No Discharge	No Discharge	No Discharge
	SW6	No Discharge	No Discharge	No Discharge	No Discharge
	SW7	No Discharge	No Discharge	No Discharge	No Discharge


*The monthly average reported for turbidity on the July 2016 DMR for IMP1 (67.5 NTU) did not correspond to the values shown in the report of analysis generated by the contract laboratory, Waypoint Analytical. The corrected value is represented in the above table. The error may have occurred if Excel was used to calculate the monthly average and a "<" symbol was used during the calculation. Note that if the analytical results include the "<" symbol, it is acceptable to use one-half (1/2) the reported Method Quantitation Limit (MQL) to calculate the monthly average.

Even though Outfalls SW1 and SW2 do not discharge into the unnamed tributary of Nonconnah Creek located on the west side of the construction site, the sample results indicated that the turbidity and total suspended solids discharged from the two outfalls was much higher than the background samples collected at IMP1. The September 2016 sampling results showed elevated levels of turbidity and total suspended solids at IMP2 compared to background samples taken at IMP1. This may indicate that erosion prevention and sediment control measures at the construction site are not effectively preventing sediment laden discharge to the unnamed tributary of Nonconnah Creek. Water samples collected at IMP1 represent the instream water quality that has not been influenced by activity occurring at the Collierville High School construction site.

According to the submitted DMRs, IMP1 and IMP2 have not been sampled at the required frequency as described in the permit. Instream monitoring points IMP1 and IMP2 should be sampled once per week. As discussed during the reporting requirements meeting held at the Renaissance Group on July 29, 2016, and mentioned in the follow-up email dated August 5, 2016, please be aware that table in subpart I.A (pg. 4) of the TN Individual Construction Permit TN0081787 shows the required sampling frequency for IMP1 and IMP2 to be 1/week.

The submitted September 2016 sediment basin documentation indicates that the NW and NE sediment basins have been installed and the SE sediment basin has not been installed. However, nearly the entire site has been disturbed. As discussed during the pre-construction meeting held May 2, 2016, the sediment basins should be constructed and fully operational before any earthwork operations up-gradient of the basins begin.

The monthly sediment basin documentation has not been completely filled out. Specifically, the water depth and water volume columns on the submitted monthly records are blank. The water depth gauge that should be installed in the sediment basins would be used to compile this information.

Routine	<input type="checkbox"/>	Comprehensive	<input checked="" type="checkbox"/>	Complaint	<input type="checkbox"/>	Follow Up	<input type="checkbox"/>	Termination	<input type="checkbox"/>
On-Site Contact (if available)									
On-Site Contact Name (Print):		On-Site Contact Title:		Signature:			Date:		
TDEC Personnel/Information							EFO: Name and Address		
Inspector's Name (Print):		Signature:		Date:		Memphis Environmental Field Office 8383 Wolf Lake Drive Bartlett, TN 38133			
Steve Owens				10/10/2016 10/14/2016					



TDEC - Division of Water Resources
Memphis Field Office

ICIS NPDES Facilities Inspection Report

Facility Data

NPDES ID:	TN0081787	Facility Site Name	Collierville High School		
		Address	South of Shelby Drive, East of Sycamore Road		
Permit Eff. Date:	May 1, 2016	Permit Exp Date:	Apr 30, 2021	SIC Code:	

Compliance Monitoring Information

Compliance Monitoring Activity Name	Compliance Evaluation (non-sampling) (CEI)				
	* If Bio Monitoring is selected above, select the method used:				
Compliance Monitoring Activity	Evaluation				

Compliance Monitoring Dates/Times

Entry Date/Time (mm/dd/yyyy hh:mm):	10/10/2016 09:50 a.m.	Exit Date/Time (mm/dd/yyyy hh:mm):	10/10/2016 12:30 p.m.
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Facility Representatives

Sam Ginn, Flintco Site Representative	Mike Simpson, COO, (901) 861-7000
On-Site Representative(s) Title, Phone Number	Responsible Official(s), Title, Phone Number

Statute and Section Information

Federal Statute:	CWA - Clean Water Act	State Statute:	Tennessee Water Quality Control Act
Programs:	NPDES-Non-construction		

Compliance Monitoring Reason:	Core Program				
Compliance Monitoring Agency Type:	State	Agency Name:	TDEC - DWR		
Did EPA assist/ Inspection?	No	Time Physically conducting activity: Days:	1	Hours:	
Inspection Type:	State	Compliance Monitoring Action Outcome:			
Lead Agency:	State	Compliance Monitoring Rating Code:	Unrated		
If Joint Inspection, what was the purpose of the other party?					


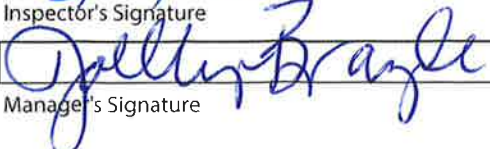
Areas Evaluated During Inspection (Check only those areas evaluated)

<input type="checkbox"/> Permit	<input type="checkbox"/> Self - Compliance Program	<input type="checkbox"/> Pretreatment
<input checked="" type="checkbox"/> Records / Records	<input type="checkbox"/> Compliance Schedule	<input checked="" type="checkbox"/> Pollution Prevention
<input type="checkbox"/> Facility Site Review	<input type="checkbox"/> Laboratory	<input checked="" type="checkbox"/> Storm Water
<input checked="" type="checkbox"/> Effluent / Receiving Waters	<input type="checkbox"/> Operations & Maintenance	<input type="checkbox"/> Combined Sewer Overflow
<input type="checkbox"/> Flow Measurement	<input type="checkbox"/> Sludge Handling / Disposal	<input type="checkbox"/> Sanitary Sewer Overflow

Compliance Monitoring Summary

See attached inspection report and/or letter.

EPA and State Representatives

	TDEC-DWR / Memphis / (901) 371-3000	10/14/2016
Inspector's Signature	Agency / Office / Phone	Date
	TDEC-DWR / Memphis / (901) 371-3000	10/14/2016
Manager's Signature	Agency / Office / Phone	Date

(Note: This form can only be printed to an XPS document, then saved for later use.)